

ABSTRACT

A linear actuator includes a first yoke part, a second yoke part opposing the first yoke part from a direction perpendicular to the axial direction thereof, an intermediate yoke part forming a first gap and a second gap, a coil disposed within a space delineated by the intermediate yoke part and the second yoke part, which forms a magnetic field between the first yoke part and the intermediate yoke part. The orientation this magnetic field is opposite between the first gap and the second gap, and orientation thereof alternates. The actuator further includes a magnet at one axial-direction end relative to the coil, which generates a fixed magnetic field in the two gaps, directed either from the intermediate yoke part toward the first yoke part or from the first yoke part toward the intermediate yoke part, and an armature disposed that is movable in the axial direction in the first gap and the second gap.